REMARKS

Favorable reconsideration is respectfully requested in view of the foregoing amendments and the following remarks.

I. CLAIM STATUS AND AMENDMENTS

Claims 1-14 were pending in this application when last examined.

Claims 1-7 were examined on the merits and stand rejected.

Claims 8-14 were withdrawn as non-elected subject matter. Applicants reserve the right to file a divisional or continuation application on any non-elected subject matter.

Claims 1, 3 and 5 are amended. Claim 1 is amended to clarify the claimed invention. Support for this amendment can be found in the claims as filed, in the specification as filed, and in Figure 1. Claim 3 is amended to give the full name for the abbreviation GRP1. Claim 5 is amended to conform with the amendment to claim 1 and to clarify the claimed invention.

No new matter has been added.

II. FOREIGN PRIORITY

Applicants note that in item 12 on page 1 of the Office Action, it is indicated that some of the certified copies of the priority documents have been received. Applicants believe this is an error and instead "all" should have been checked. Alternatively, if only some of the foreign priority documents have been received, Applicants respectfully request the Examiner to indicate which documents are missing.

III. CLAIM OBJECTION

On page 2 of the Office Action, claim 3 was objected to for use of the term GRP1 without spelling out the full name at the first instance. Applicants note that this objection has been overcome for reasons which are self-evident.

IV. WRITTEN DESCRIPTION REJECTION

In item 7 on page 3 of the Office Action, claims 1-7 were rejected under 35 U.S.C. § 112, first paragraph, for lack of written description support. In particular, the Office contends that written description support description does not exist for the claimed probe, the membrane localization sequence, or the claimed genus of pleckstrin homology domain from GRP1.

Applicants respectfully traverse this rejection, as applied to the amended claims.

Applicants note that the structure of the claimed probe is described in the specification. For instance, Figure 1 gives a graphical representation of the claimed probe. Applicants further note that claim 1 indicates that the probe comprises a polypeptide which can specifically bind to a lipid second messenger, a first chromophore linked to one end of the polypeptide through a rigid linker sequence, a second chromophore linked to another end of the polypeptide through a second rigid linker sequence, a flexible site in the second rigid linker sequence, and a membrane localization sequence linked to the second chromophore through a third rigid linker sequence. Thus, the Applicants submit that the structure of the claimed probe has been given. Further, claim 1 is amended to indicate that when the polypeptide is bound to the lipid second messenger, the probe is capable of FRET.

Applicants therefore respectfully suggest that the structure and function of the claimed probe has been described in sufficient detail to indicate to a person of skill in the art that Applicants had possession of the claimed invention.

Furthermore, Applicants note that Example 1 on page 16 has examples of three probes within the scope of amended claim 1. Also, the examples show such probes function for detection and quantification of lipid second messenger. Thus, Applicants submit that such examples give further evidence that Applicants had possession of the claimed invention.

In regard to the membrane localization sequence, Applicants note that a person of skill in the art would instantly understand that such sequences are well known in the art and function to anchor the probe to the desired membrane.

Finally, in regard to "pleckstrin homology domain from GRP1", Applicants note that such is well known in the art. For instance, Applicants note such is discussed in Jalink (US 6,596,499), which is the reference of the below-noted prior art rejection. Please see claim 1 of

this reference. Applicants therefore suggest that a person of skill in the art, understanding that the homology domain and the membrane localization sequence are well known in the art would understand that Applicants had possession of these elements.

Thus, for the above-noted reasons, Applicants submit that this rejection, as applied to the amended claims, is untenable and should be withdrawn.

V. ENABLEMENT REJECTION

In item 8 on page 6 of the Office Action, claims 1-7 were rejected under 35 U.S.C. § 112, first paragraph, on the basis that the specification is enabling for a probe wherein the lipid second messenger-binding protein is the pleckstrin domain from GRP1 and the linker sequence is SEQ ID NO: 1 and at least one other sequence has a single di-glycine motif, but not for a probe with any polypeptide that binds any lipid second messenger and that contains any membrane localization sequence.

Applicants respectfully traverse this rejection, as applied to the amended claims, for the following reasons.

As noted above, the structure and function of the claimed probe is described in detail and via specific species in the specification. Further, Applicants note that each component of the claimed probe is well known to those skilled in the art.

Finally, Applicants note that claim 1 has been amended to require that the claimed probe is capable of FRET upon binding of the polypeptide to the lipid second messenger.

Therefore, Applicants respectfully suggest that a person of skill in the art, based on the teachings in the specification and the knowledge in the art, would be able to practice the claimed invention without undue experimentation.

Thus, Applicants respectfully suggest that this rejection, as applied to the amended claims, is untenable and should be withdrawn.

VI. ANTICIPATION REJECTION

In item 9 on page 11 of the Office Action, claims 1-4, 6 and 7 were rejected under 35 U.S.C. § 102(e) as anticipated by Jalink (U.S. Patent No. 6,596,499).

Applicants note that claim 1, as amended, is directed towards a polypeptide which can specifically bind to a lipid second messenger wherein a first chromophore is attached to one end of the polypeptide and a second chromophore is attached to another end of the polypeptide. Applicants respectfully suggest that Jalink fails to teach this structure of amended claim 1. Applicants further note that under U.S. law a reference anticipates only if it teaches each and every element of the claimed invention. Thus, Applicants suggest that this rejection, as applied to the amended claims, is untenable and should be withdrawn.

VII. CONCLUSION

In view of the foregoing amendments and remarks, the present application is in condition for allowance and early notice to that effect is hereby requested.

If the Examiner has any comments or proposals for expediting prosecution, please contact the undersigned attorney at the telephone number below.

Respectfully submitted,

Yoshio UMEZAWA et al.

By: _____

William R. Schmidt, II
Registration No. 58,327
Attorneys for Applicants

WRS/lq
Washington, D.C. 20006-1021
Telephone (202) 721-8200
Facsimile (202) 721-8250
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